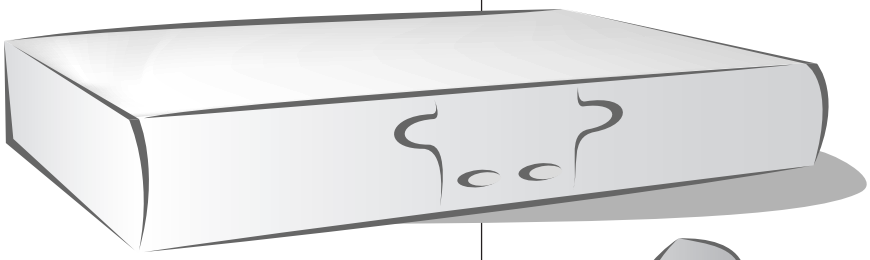
DIGITAL TERRESTRIAL TV RECEIVER

ITD 5510



USER MANUAL

ENGLISH

SAGEM

Technology in action

CONGRATULATIONS!

This new generation of Set Top Box gives you access to new digital services and makes it easy for you and your family to choose the very best experiences of Digital TV.

Once you have connected your Set Top Box and adjusted it according to your preference, you can enjoy all the services

You can update your Set Top Box through the satellite stream as new functions and services become available.

SAGEM Set Top Box operates a policy of continuous development. Therefore we reserve the right to make changes and improvements to any of the products described in this manual without any prior notice.

The EMC Directive 89/336/EEC is applied to this product.

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1. GENERAL INFORMATION

1-1 SAFETY

In order to keep your Set Top Box high performance, it should:

- be located in an indoor place to protect it from lightning, rain and direct sunlight,
- be located in a dry and well-ventilated place,
- be protected from damp,
- be installed in a way to avoid violent shocks,
- be plugged directly into the mains with the cords provided with the Set Top Box. The use of an extension cord is not recommended,
- do not place anything on top of your Set Top Box to permit ventilation.

Be careful

- A contact with a liquid would lead to deterioration of your Set Top Box, which could cause failure. Never open your Set Top Box, in case of technical problem contact qualified service personnel.
- Like any electronic device, the Set Top Box contains fragile components. It should thus be installed in a place where it is unlikely to fall and out of reach of children.
- The case of the Set Top Box can be cleaned with a soft and dry cloth. Do not use any type of abrasive pad, scouring powder nor solvents, such as alcohol or turpentine, as they could damage the surface of the case.
- The Set Top Box must be disconnected from mains supply (from wall socket or rear panel) before any modification of connection between TV, VCR or antenna. Take care to provide free access to mains plug and socket.
- Do not forget to put the batteries inside the remote control unit.

1-2 PACKING LIST

Your Set Top Box is delivered with the following components :

- a remote control unit,
- 2 batteries (R6) for the remote control unit,
- a scart cord for connection to the TV set,
- a power cord,
- this user's manual,
- an RF cord.

1-3 CONNECTION TO THE MAINS SUPPLY

The Set Top Box must be connected by the power cord to a 220-240V wall socket. Turn on the mains power on the wall.

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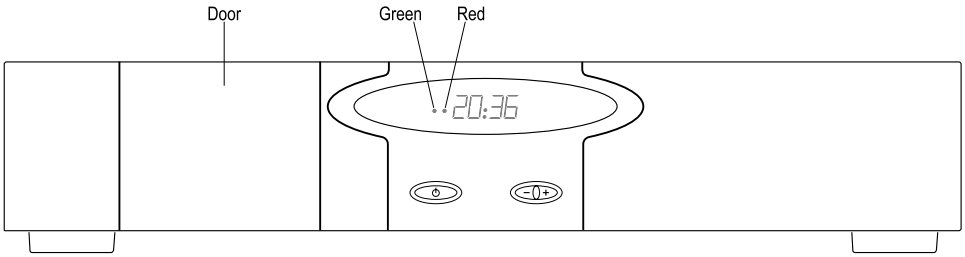
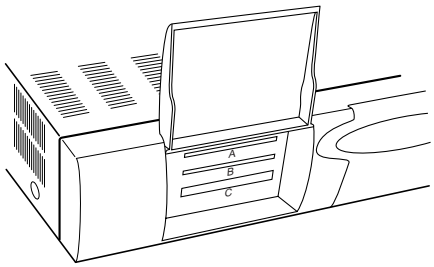
GENERAL DESCRIPTION .2

2-1 FRONT PANEL DESCRIPTION



	Stand-by and switch on key.
	Programme changing key.
Red LED(*)	Stand-by mode.
Green LED	Reception of commands from remote control.

4 digit front panel display



A: for the subscription smart card
B: not used
C: not used

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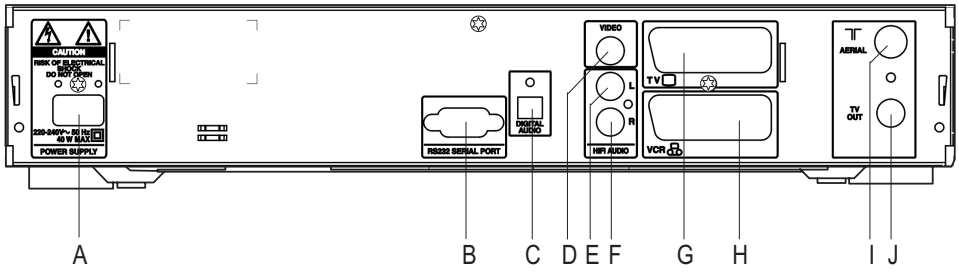
2. GENERAL DESCRIPTION

2-2 REAR PANEL DESCRIPTION



A - 220-240V 50Hz power supply socket (**)
B - Socket for Serial Data Port
C - IEC 958 connector for optical connection to HI-FI audio
D - Socket for connection to video devices (*)
E - Socket for connection to HI-FI audio, left channel (*)
F - Socket for connection to HI-FI audio, right channel (*)
G - Scart socket for connection to the TV set (*)
H - Scart socket for connection to the VCR (*)
I - Terrestrial network input (*)
J - RF output for TV (*)
(*) : Security electric low voltage
(**) : Excessive voltage

2-3 REMOTE CONTROL UNIT

2-3-1 Batteries installation

The remote control unit requires two R6 batteries for operation.
The diagram inside the battery compartment will show you how to insert the batteries.

Warning: Only use the appropriate batteries, according to the manufacturer specifications (see "Specifications" section on page 33). The provided batteries are not rechargeable. Bring back the defective or empty batteries to your local waste disposal in accordance with the current regulations. Do not dispose of used batteries in your dustbin.

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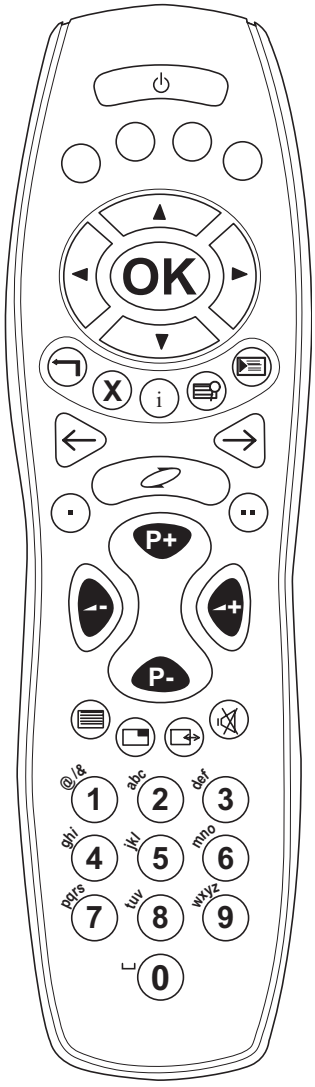
2-3-2 RCU operation



KEY	FUNCTION
	Stand-by
Red	Color function key
Green	Color function key
Yellow	Color function key
Blue	Color function key
	Left
	Right
	Down
	Up
	Confirm
	Return
	Exit
	Information
	Guide
	Menu
	Change page in events
	Change page in events
	Not used
	Not used
	Not used
	Audio Volume -
	Audio Volume +
	Next programme
	Previous programme
	Teletext
	Not used
	TV/VCR
	Audio Mute
0-9	Numerical keys

Be sure to point the remote control unit directly towards the Set Top Box.

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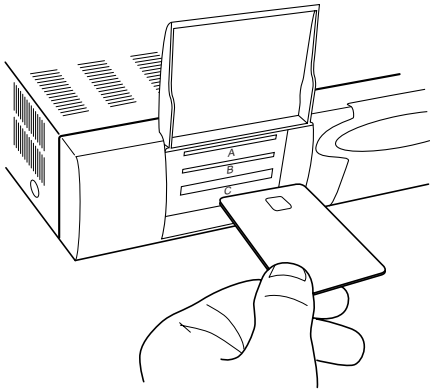
2-3-3 Smart card

2-3-3-1 Subscription smart card and banking card

If your programmes are transmitted with an access control, your card must be inserted in the smart card reader. In order to avoid loss or damage, this card should never be removed from the unit.
To insert the card, open the door located on the left side of the front panel and insert your card, microchip facing up in the slot.



Card reader A for subscription

Note:

- Never extract or insert your card unnecessarily.
- Do not bend your card.
- Do not clean your card with a liquid of any kind.

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CONNECTIONS .3

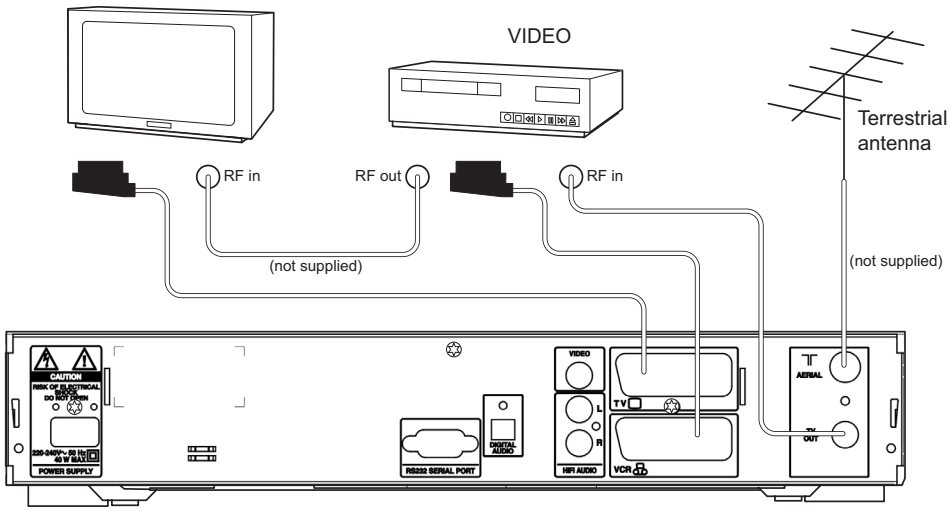
3-1 INTRODUCTION

There are several ways of connecting the Set Top Box to your audio/TV system. Some of the methods enable you to listen to music in stereo sound of CD like quality.
Consult your local supplier for assistance in setting up an audio/video configuration best suited to your unique requirements.

Warning:
Disconnect the Set Top Box from the mains before connecting or disconnecting any device to it.

3-2 CONNECTION TO TV SET, VCR AND ANTENNA

Only connect your satellite antenna when the Set Top Box is unplugged.
The Set Top Box connects directly to your TV by a scart connector which includes RGB signals to garantee optimum image quality. Connect the supplied scart cable between the TV scart connector of the Set Top Box and the main scart connector of the TV (the one with 3 points indicating that RGB provision is available).
Then connect the Set Top Box (VCR scart connector) to your VCR (main cart connector on the VCR).
The scart cord is not supplied.



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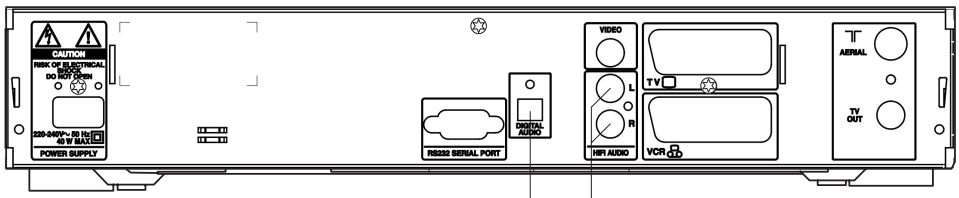
3. CONNECTIONS

3-3 HI-FI AMPLIFIER



Hi-Fi amplifier (Digital-Optical input)

Hi-Fi amplifier (analog input)

You can connect your Set Top Box to your Hi-Fi amplifier (standard, with equalizer or even better, Prologic) to obtain excellent listening comfort comparable to those of audio programmes.
Volume adjustment is possible directly from your Set Top Box.

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SET TOP BOX INSTALLATION .4

4-1 PRELIMINARY

Your Set Top Box is supplied ready to use for a standard configuration.

TV : 4/3 format, RGB, stereo sound

VCR : PAL, stereo sound

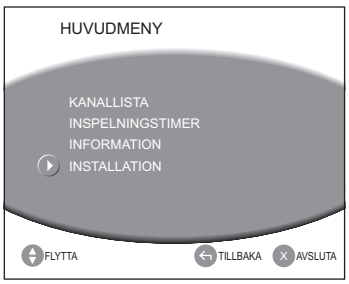
Access to the installation screens shown below will enable you to adapt your Set Top Box to your favourite equipment.

Generally, access to the screens is obtained by pressing the ☰ key (Menu).

You can memorise your selections by pressing the OK key.

Return to the previous screen by pressing the ↩ key (Return).

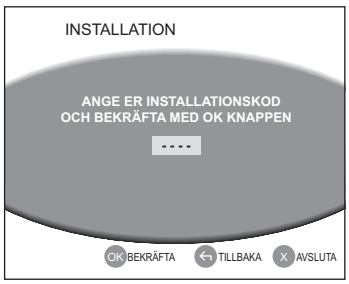
Exit from all the screens by pressing the X key (Quit).



Use the ▼ arrow key to move down to the INSTALLATION line and press OK to confirm.

Access to the installation menus is protected by a secret installation code to avoid any inadvertent misadjustment. Your Set Top Box is supplied with default code 1234.

Note: you will not be prompted to enter any code as long as the installation code is 0000.

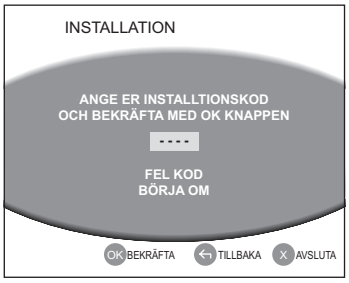


Enter your code.

As soon as each value is entered, the segment is replaced by a star.

Using the ◄ arrow key of the remote control unit, you can come back to a value that has already been entered and modify it provided the code has not been confirmed by OK.

After entering the four digits press OK to confirm.



An error message will be displayed if the code you have entered is not correct.

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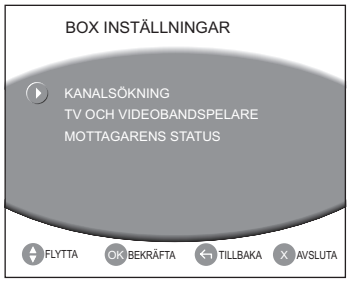
4. SET TOP BOX INSTALLATION

4-2 CHANNELS INSTALLATION WITH SCANNING

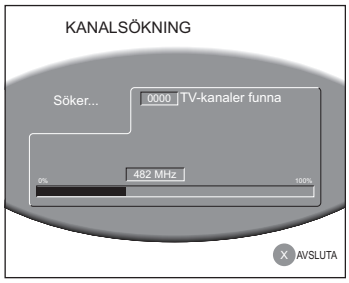
This installation will complete list A with all the channels fournd during the scanning of all the frequencies. This list is a summary of all the channels and will not be modified. It will be possible to create personal lists based on this reference list (see chapter 4.5).

Press (OK) to search.

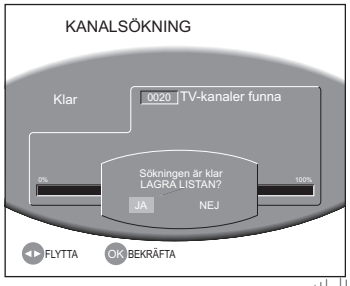


Press (OK) to confirm.

An indicator at the bottom of the screen will indicate the percentage of the scanned frequencies band.
The current frequency found is displayed in real time.



A message at the end of the scanning process will ask you to memorise. Press (OK).
You can cancel the scanning process at any time by pressing the (X) key.
You can memorise or not.



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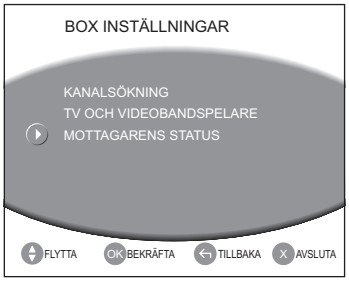
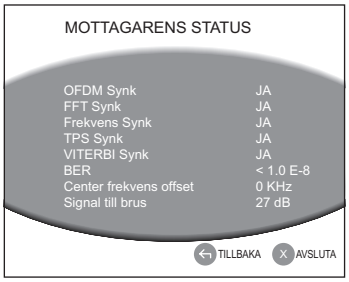
4-3 NETWORK STATUS



At any time you can check the newtork status
Press (OK) to confirm.



Technical parameters are displayed for information.

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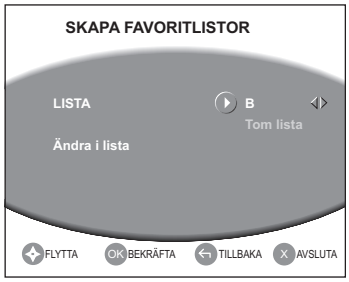
4. SET TOP BOX INSTALLATION

4-4 FAVOURITE LISTS INSTALLATION

This function will enable you to make up a FAVOURITE list of the TV or radio type from the reference list A (built from provider (transponder) installation or a scanning) and erase it entirely to reconstruct a new one.



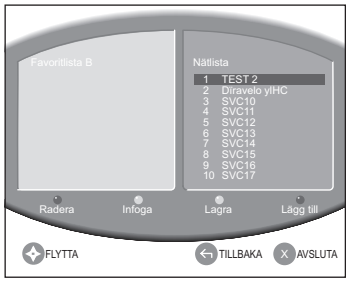
CREATION

Two lists are displayed simultaneously.

- The list on the right side is the reference list (issued from transponder or scanning installation).
- The list on the left side is the list under construction.

Use the ◄ and ► keys of the remote control unit to move from one list to another.

Use the ▼ and ▲ keys of the remote control unit to move through a list. To improve navigation inside a list, you can enter directly the number of a channel, and the index will go directly on it.



To copy a channel from list A to favourite list (B to H), place the index on the programme to be transferred and press the blue key. Restart as many times as necessary.
At the end of creation, memorise using the yellow key.

MODIFICATIONS

At any moment, yo can modify your favourite list (B to H).

- To erase, place the index on the channel to be erased and press the red key.

Memorise at the end of creation using the yellow key.

- To insert a new channel from main list A (for example if you have forgotten to put it in number 5).

Move the index in the list A (all channels), select it by pressing the green key (the index moves to the favourite list).
Move the index in your favourite list up to the channel just after the number where you want to insert (example 6), press the green key.

- To move a channel from one place to another in a favourite list, delete it and then insert it from the main list to the place you want.

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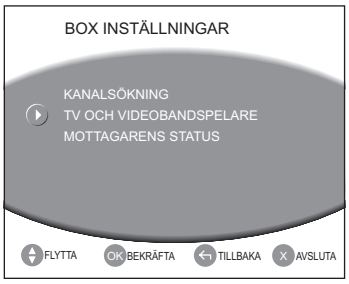
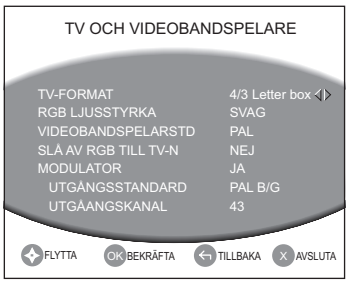
4-5 AUDIO/VIDEO INSTALLATION



Press (OK) for access to this menu.

4-5-1 TV

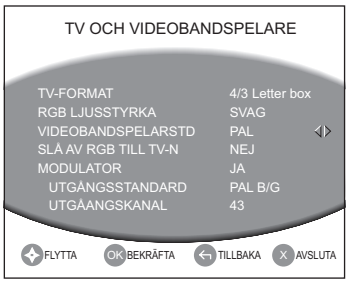


A number of choices are available.

Scroll through the choices using the (or) arrow keys.

- TV format 4/3, 16/9 or letter box.
- RGB brightness level high or low.
- RGB standard yes or no.

4-5-2 VCR



A number of choices are available.

Scroll through the choices using the (or) arrow keys.

- PAL or SVHS standard
  If you have chosen PAL or SVHS, the TV composite video standard will be PAL. Mono or stereo sound.

After a final check, press (OK) to memorise the settings.
Press (Return) to continue installation or (X) (Quit) to terminate.

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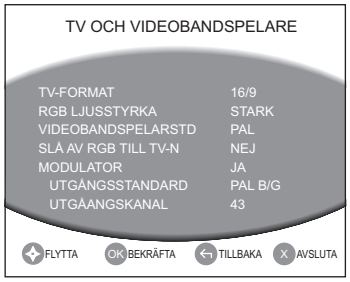
4. SET TOP BOX INSTALLATION

4-5-3 Modulator

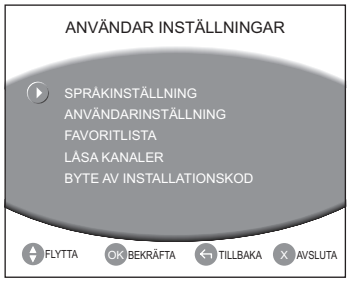
If you want to adjust the channel for an another TV set:
- directly access the menu,
- choose the channel (21 to 69) by entering the number,
- verify that the VCR standard is PAL,
- choose the standard of your country (B/G, I or K).

The channel is factory-set to 43.

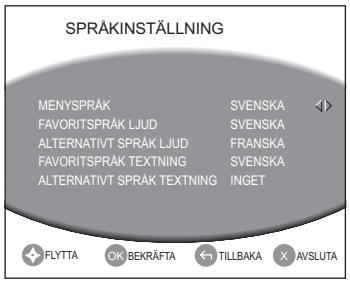


4-6 LANGUAGE SETTING

Press (OK) for access to various configurations.
Select LANGUAGE SETTING and press (OK) to confirm.



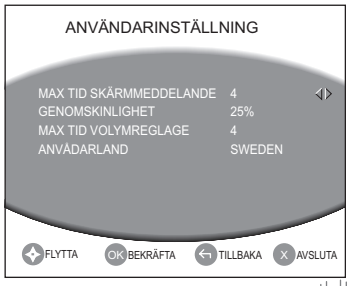
- MENU LANGUAGE
  You may select the menu display language.
- MAIN AND ALTERNATIVE AUDIO LANGUAGE
  If more than one audio language is transmitted, you may select the main and the alternative languages.
- SUBTITLES
  If more than one subtitle is transmitted, you may select the main and the alternative subtitles. To have no subtitle, select NONE for main or alternative subtitle.



4-7 TIME SETTING

The time is set from the GMT time by using the ◄ or ► key and selecting the country where you live.

Press (OK) to confirm.



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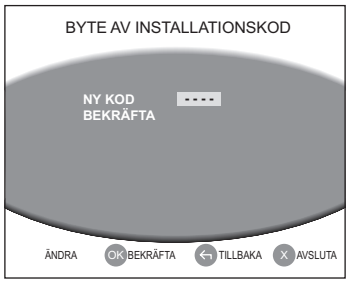
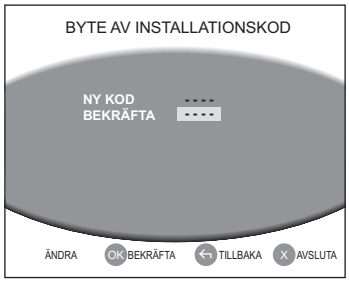
4-8 CHANGE PROTECTION CODE

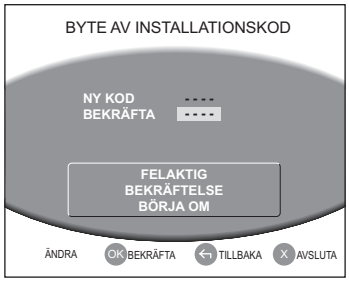


Enter your new code.
The first segment blinks until its value is entered, then the second segment blinks, etc.
As soon as the value has been entered, the segment is replaced with a star.

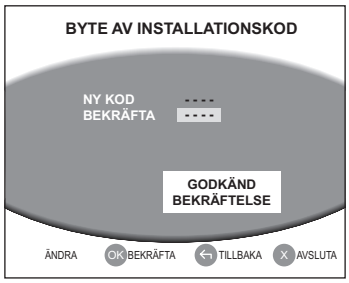
Use the ◄ arrow key on the remote control unit to come back to a value that has been entered and modify it until the whole is confirmed by OK.
In this case, the value becomes a blinking segment again, indicating that entry is possible.



Enter the same new code to confirm it.



If you have not entered the right code, you will see an error message.



Indication of correct acknowledgement.

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5. USING YOUR SET TOP BOX

5-1 CHANGING CHANNELS AND LISTS

5-1-1 Switching channels

The Set Top Box provides several ways for channel switching:

- **Using the ◃ and ▹ keys on the front panel or P+ and P- on the remote control unit :**

The Set Top Box switches to the next service up (P+) or the next service down (P-) from the current channel.

- **Entering the numerical code for the channel on the remote control keypad**

Type in a single digit (1), which is displayed in the 3rd digit position on the front panel display and on the screen banner, e.g. "1—".
If you do not type in another digit within 2 seconds, the digit is displayed in the first digit position on the front panel display and on the screen banner, the second and third digits are blanked out and the video and audio playing process is activated on the new Video service. e.g. "1".
If you type in another digit (2), this is displayed in the 2nd digit position. e.g. "12-".
If you do not type in another digit within 2 seconds, the 2 digits are displayed in the first and second digit positions on the front panel display and on the screen banner, the third digit is blanked out and the video and audio playing process is activated on the new Video service. e.g. "12".
If you type in another digit (3), this last digit is displayed in the first digit position on the front panel display and on the screen banner and the video and audio playing process is activated on the new Video service. e.g. "123".
If the numerical code entered does not correspond to a video service in the list, the Set Top Box selects the first lower Video service in the list.

5-1-2 Info zapping

This way of zapping enables you to view data concerning the current programmes on the different Video services of the list.
Press the P+ or P- keys (or i key and then ▲ and ▼ keys) and hold them down.
The screen banner is displayed showing data concerning the programme on the next video service up (P+) or down (P-).
The current audio and video streams are still played.
As you release the key, the video and audio playing process is activated onto the service whose number is currently displayed on the screen banner.

5-1-3 Quick return key (↩)

The ↩ key enables you to zap between the current channel and the last channel viewed
You can use this key e.g. when waiting for a feature film to begin.

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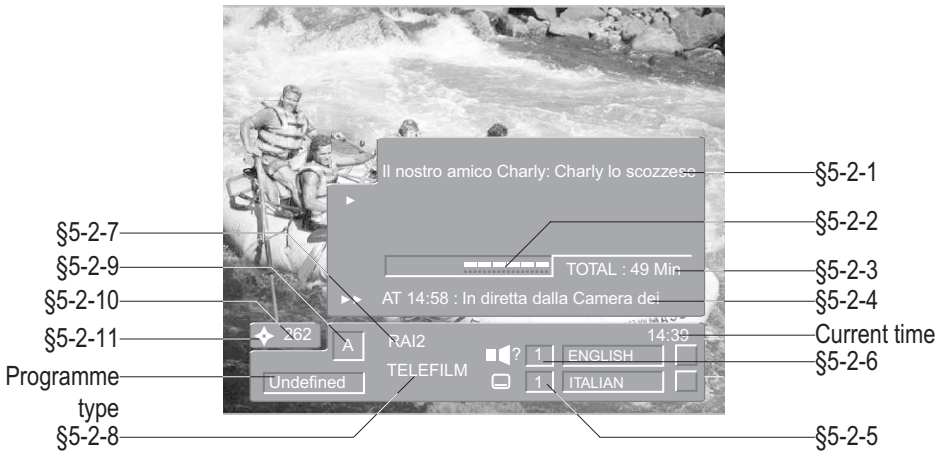
5-2 INFO PROGRAMME SCREEN



5-2-1 Summary of the current programme

By pressing the (i) key on the remote control unit, you can read the summary of the current programme (available if the channel provider broadcasts it).

5-2-2 Bargraph indicator

By pressing the (i) key on the remote control unit, you can read the Bargraph indicator showing the time elapsed since the beginning of the current programme (available if the channel provider broadcasts it).

5-2-3 Total length of the current programme

By pressing the (i) key on the remote control unit, you can read the total length of the current programme (available if the channel provider broadcasts it).

5-2-4 Short summary of the next programme

By pressing the (i) key on the remote control unit, you can read the Short summary of the next programme (available if the channel provider broadcasts it).

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5-2-5 Number of broadcasted audio languages

By pressing the (i) key on the remote control unit, you can read the number of broadcast audio languages.

5-2-6 Change current audio language played

By pressing the (i) key on the remote control unit, you can read the name of the current audio track played.
You can change it by pressing the red key (A) on the remote control unit.

5-2-7 Name of the current channel

By pressing the (i) key on the remote control unit, you can read the name of the curent channel.

5-2-8 Name of the current programme

By pressing the (i) key on the remote control unit, you can read the name of the current programme (available if the channel provider broadcasts it).

5-2-9 Reference of current favourite list

By pressing the (i) key on the remote control unit, you can read the reference of the current favourite list (A to H).
You can change the current list by pressing the blue key.

5-2-10 Number of current channel

By pressing the (i) key on the remote control unit, you can read the number of the current channel in the current list.

5-2-11 Navigator function

By pressing the (i) key on the remote control unit, you can continue to see your current programme and get all the information on other programmes before zapping.
The ▲ and ▼ keys allow you to see information on the other channels.

- Press the ▶ key to see the summary of the next programme.

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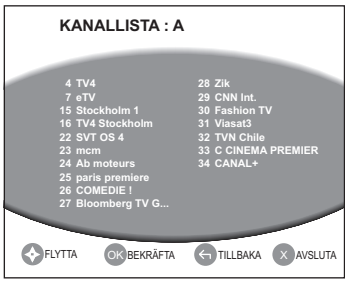
5-2-12 Summary of the next programme

By pressing the (i) and ▶ keys on the remote control unit, you can read the summary of the next programme (available if the channel provider broadcasts it).
Change pages with ◀ ▶.

5-2-13 Transparency

You can change directly the transparency of the zapping banner: press (i) for 2 seconds, then adjust with ◀ and ▶ then OK.

5-3 LIST OF CHANNELS



By pressing the (Menu) and OK keys, you can display the TV channel list and navigate through it using the ▲, ▼, ◀ and ▶ arrow keys.
Change favorite lists with ◀ ▶.

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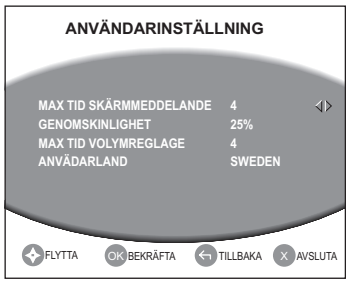
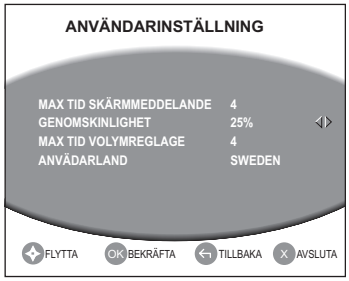
5. USING YOUR SET TOP BOX

5-4 USER PREFERENCES (APPEARANCE PREFERENCES)

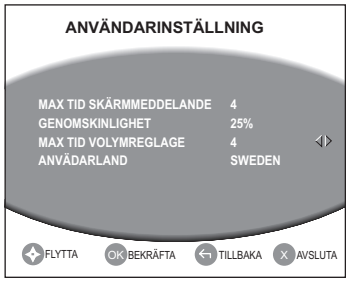
- BANNER TIME OUT
  When you switch channels, an information banner will be shown for a few seconds.
  You can select for how long the banner will be shown (0 to 5 seconds). 0 second to have no banner displayed when zapping.



- BANNER TRANSPARENCY
  When you switch channels, an information banner will be shown for a few seconds.
  You can select the transparency aspect of the banner (0% for full blue, 100% to full transparent).



- VOLUME BAR TIME OUT
  Select how long the volume bar will be displayed (0 to 5 seconds).
  0 second to have no volume bar displayed.
  Press (OK) to confirm.



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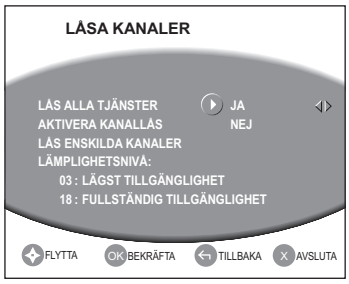
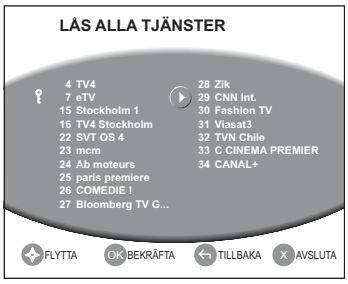
5-5 LOCKING





4 types of locking are provided:

- general locking (yes/no) represents the highest Set Top Box locking level.
  You will be prompted to enter your code each time you switch on your Set Top Box.
  Note: this locking will be activated after one standby/on cycle
- Locking activation (yes/no) lock or unlock in one operation all the channel locked
  This offers the advantage of being able to lock several channels and unlock them temporarily.
- Individual channel locking: you can choose to lock only selected channels. To do so, navigate through the channels using the ▲ or ▼ key and press OK each time you want to lock a channel.
- Age rating: enter the age to lock according to the broadcaster signalling.

5-6 CHANGING AUDIOTRACK AND SUBTITLES ON A CURRENT CHANNEL

Settings made in this function are only valid for the channel you are currently watching. If you leave the channel, and return to it again, the temporary settings will be gone.
Press the i key and then the red key until you get the required audiotrack.
Press the i key and then the green key until you get the required subtitles.

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5. USING YOUR SET TOP BOX

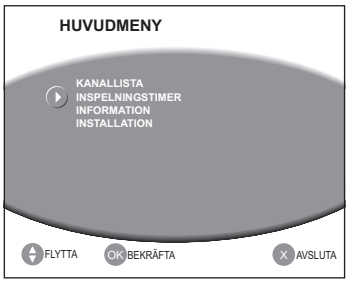
5-7 VOLUME ADJUSTMENT

To increase or reduce the volume, use the + or - keys.
To turn off the sound quickly, press the mute key.
Press the mute key again to restore the sound.
The audio volume cannot be adjusted in the VCR and TV modes.

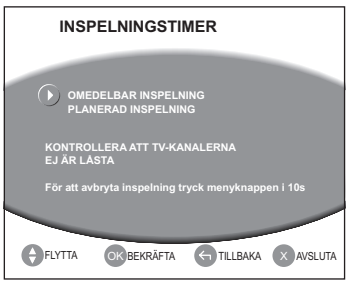
5-8 TV/SAT/VCR MODE

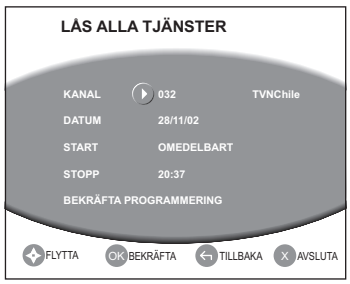
By pressing the key, you can display the terrestrial programme or the VCR programme on your TV screen.

5-9 TIMER PROGRAMMING

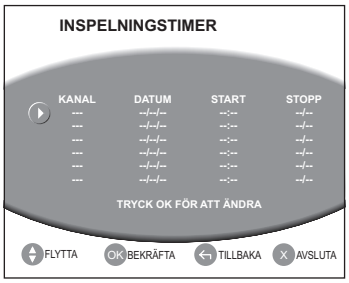


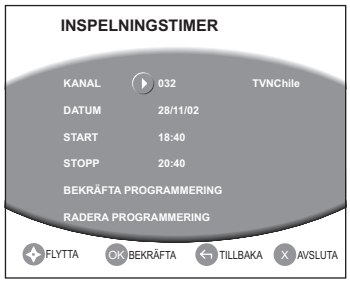
- Press OK.
- Sleep timer.





- Enter end time of programme.
- Events timer.





- Enter channel number. Press enter date of programme. Press enter start time of programme. Press memorise or cancel if you do not want to save.

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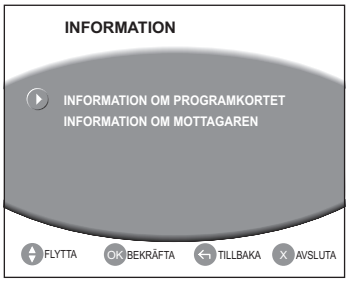
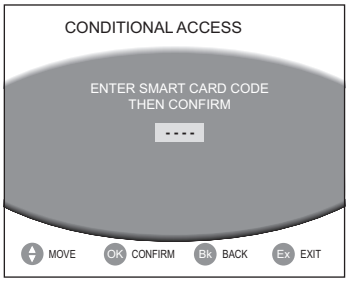
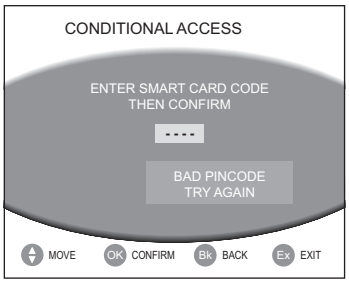
5-10 CONDITIONAL ACCESS



5-10-1 Smart card code protection



- If the PIN code is other than 0000 the first screen displayed is used to check the PIN code:
  Contact your programme provider to have the PIN code.



- If the PIN code is not correct, you may try again (unlimited retries). Before each retry, this screen is displayed:
  After good PIN code the screen is displayed.

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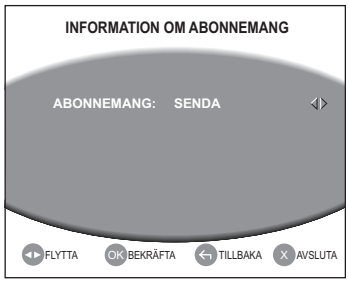
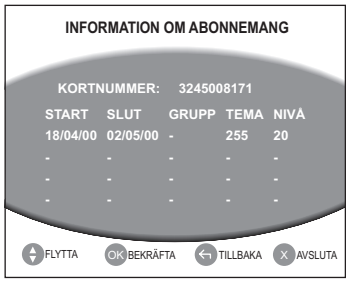
- Different functionalities are offered.
  By pressing (OK) button, the user can access to the selected menu.

5-10-2 Subscription information

- The right and left arrow keys make it possible to select the operator for which the user wants to view the access rights.
  When the (OK) button is pressed, the following screen is displayed.





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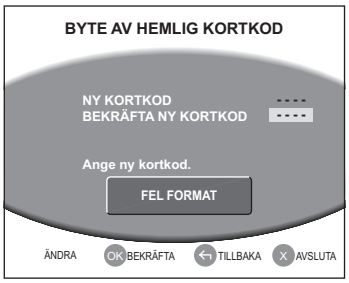
5-10-3 PIN code modification

You can modifie the smart card code by entering it and confirm a second time.

error message if not the same



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5-10-4 Conditional access messages

These 4 messages can be displayed.
Check your smart card or call your operator call center for any problem concerning the smart card or the subscription.

If you have no right, the following screen is displayed:

If the smart card is removed, the following screen is displayed:

If the smart card is not valid, the following screen is displayed:

5-11 GUIDE MODE

The guide mode corresponds to a specialized openTV application on a stream (if your operator broadcasts one). You can call up this application by pressing the Guide ( ) key. If there is no guide stream, the channel list is displayed.

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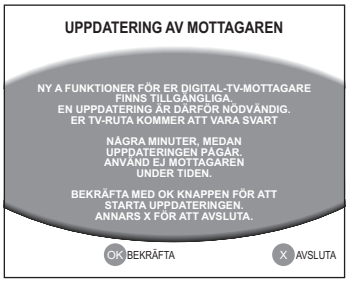
5-12 SET TOP BOX ENHANCEMENT

The Set Top Box goes in this state when a new version of software is available on the network.

- "init" is displayed on the front panel display.
- The Welcome screen is still displayed.

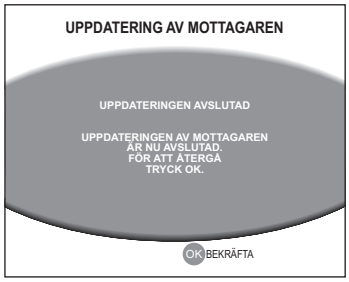
Then the following screen is displayed.


UPPDATERING AV MOTTAGAREN
NY A FUNKTIONER FÖR ER DIGITAL-TV-MOTTAGARE FINNS TILLGÄNGLIGA.
EN UPPDATERING ÄR DÄRFÖR NÖDVÄNDIG.
ER TV-RUTA KOMMER ATT VARA SVART
NÅGRA MINUTER, MEDAN UPPDATERINGEN PÅGÅR, ANVÄND EJ MOTTAGAREN UNDER TIDEN.
BEKRÄFTA MED OK KNAPPEN FÖR ATT STARTA UPPDATERINGEN.
ANNARS X FÖR ATT AVSLUTA.
OK BEKRÄFTA
X AVSLUTA

You can delay the downloading process by pressing the (X) key. This process will be displayed again the next time you switch on your Set Top Box.

When pressing the (OK) key, the downloading will be performed:

- Then the screen becomes black
- The 5 steps of the download process can be followed on the front panel display: Flash on led.



During this mode no action from the user is authorized.
On completion the download process "init" is diplayed on the front panel display and the following screen is displayed.

Then press the (OK) key, the Set Top Box switches in wake up status.

Note: If the download process is not correctly performed, the screen stays black and error messages are displayed on the front panel display (e.g. Flash on led).

Then put the Set Top Box in standby mode and switch it back on to perform downloading again.

If this operation does not succeed, unplug the mains cord and the Antenna cord. Then plug them again to perform downloading again. If the problem is still present, call your supplier's hot line service.

The terminal is not provided with a display and the front panel LED is used to indicate causes of failure if, at the end of the procedure, the green LED flashes quickly.

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Error Code	Origin of Error	User Action
ER02, ER09, ER10	Reception error	Acknowledge the message by OK If necessary, repeat your request
ER03, ER04, ER05	Flow validity errors	Acknowledge the message by OK If necessary, repeat your request
ER07, ER08	Local errors	Acknowledge the message by OK Repeat your request
ER00, ER01, ER06, ER11, ER12	Various errors	Acknowledge the message by OK If necessary, repeat your request
Pb01, Pb02, Pb03, Pb04	Terminal defective	See your dealer for replacement

5-13 TROUBLESHOOTING

All front panel indicators are off ⇒ Check power supply

The remote control has no effect on the terminal ⇒ Point the remote control towards the terminal
⇒ Check the state and polarity of the batteries

The red front panel LED remains on ⇒ Switch terminal from stand-by to on

The message “invalid card” is displayed ⇒ Check that you have inserted a card
⇒ Check the card is inserted with chip facing up
⇒ Check the card is completely inserted

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5-14 OUTLINE SPECIFICATIONS

Tuner/Modulator

Connector: IEC 169-2 female
RF frequency range: 470...862 MHz
Channel bandwidth: 8 MHz
Loop through: 47…862 MHz
Tuning step: 166,66 kHz
Sensitivity (QAM64, 2/3 8 k): -77 dBm
Maximum level: -20 dBm
RF Booster/modulator: UHFCh 21 to 69
TV standard: B/G, K, I (selectable)

Demodulator

Waveform: QPSK, 16-QAM, 64-QAM
Code rate: 1/2 to 7/8
OFDM mode: 2 k/8 k
Mode: Non hierarchical
Guard interval: 1/4, 1/8, 1/16, 1/32
De-interleaver: 12 x 17 Forney convolutionnal
Outer decoder: Reed Solomon (204, 188, 8)

Demultiplexing/Descrambling

CD ISO/IEC 13818-1 compliant

Video decoder

MPEG-2 (ISO/IEC 13818-2)
Profile level: MP@ ML
Input rates: 1.5 to 15 Mbit/s
Aspect Ratio: 4:3 and 16:9
Video resolution: 720x576, 704x576, 544x576, 480x576, 352x576, 352x288
Conversion: Pan and scan, Letter box
Resizing: Down/up (1/4, 1/16)

Audio decoder

CD ISO/IEC 13818-3 compliant
MPEG layer I et II (Musicam Audio)
Mode: Mono, Stereo, Joint stereo
Sampling frequency: 32/44.1/48 kHz

Microprocessor and memories

Processor: IBM power PC CPU
108 MHz, 150 dhrystone MIPS
RAM memory (PPC+video) 8 Mbytes
Flash memory 4 Mbytes
Eeprom: 8 Kbytes

A/V data input/output

TV scart
RGB, CVBS, Audio stereo

VCR scart
CVBS, Y/C out, Audio stereo

RCA Video output
CVBS

RCA Audio L/R
Volume and mute control

Digital Audio output
IEC 958 Fiber Optic

Data input/output

Serial port
Connector: 9 Pin DB9 F
Protocol: RS232 Asynch
Transfert rate: 115 kbps

Conditional Access interface

Smart Card reader:1

Front panel

4 digits Orange color display
3 leds - 3 buttons
IR sensor: 38 kHz

Rear panel

Tuner (IEC 169-2 F): 1
RF MODULATOR (IEC169-2 M): 1
SCART (TV, VCR): 2
AUDIO L/R (RCA/Cinch): 2
VIDEO CVBS (RCA/Cinch): 1
DIGITAL AUDIO:(IC958): 1
SERIAL PORT: 9 Pin D

Power supply

AC 220-240 V ~50 Hz
Type: SMPS
Power consumption max. 40 W (stand-by 9 W)
Protection: internal fuse

Physical specifications

STB
Color: Silver
Size (wxdxh): 380x260x70 mm
Weight: 2.3 kg
Operating temp. +5°C to +40°C

Total packing (carton box)
total weight: ~3.7 kg
Size (wxdxh): 492x323x157 mm
Storage temp. -25°C to +65°c

Accessories

40 keys Remote Control
NEC Code
Operating distance up to 7 m
Batteries 2 x 1.5 V (type AA)

Power cord: Euro cord
Scart cord
RF cable
user manual

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SAGEM

Technology in action

http://www.sagem.com

Customer Support Service : Athens (01) 94 99 200
Thessaloniki (031) 372 372

All characteristics contained in this manual are meant for information only and are subject to change without notice.